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INTERNATIONAL TRADE AND SUSTAINABLE DEVELOPMENT IN INDUSTRIALIZING COUNTRIES

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August 1992



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INTERNATIONAL TRADE AND SUSTAINABLE DEVELOPMENT IN INDUSTRIALIZING COUNTRIES

INTRODUCTION

In the next 40 years the population of this planet will increase by at least 3.7 billion. Ninety per cent of this demographic boom will take place in poor countries.⁽¹⁾ In addition to the environmental impact of this population explosion, these countries are faced with other acute environmental problems that are closely linked to economic development and thus extremely challenging and difficult to deal with.

Environmental concerns of Third World countries often go beyond the boundaries of these countries to become issues that concern the entire planet. The depletion of the ozone layer and the greenhouse effect are a case in point. These are problems with a global dimension and, as such, leave few people indifferent.⁽²⁾ Referring to the fact that energy consumption will be five times as high 40 years from now, Andrew Steer writes: "If emission per unit of output remains unchanged, tens of millions of people will die prematurely each year as a result of pollutants, water shortages will become intolerable, and tropical forests and other natural habitats will shrink dramatically."⁽³⁾

(1) Andrew Steer, "The Environment for Development," *Finance and Development*, June 1992, p. 19.

(2) In this field, scientific evidence is often contradictory and not very convincing. For instance, according to the Marchall report, between 1940 and 1970 the temperature of our planet dropped instead of increasing, while in the twenty-first century we can expect an increase of not more than one-tenth of one degree, which contradicts the conclusions reached by other scientists so far. Although one can hardly speak in terms of an environmental catastrophe, it does make sense to promote sustainable development and respect for the environment.

(3) Andrew Steer (1992), p. 18.

In some parts of the world, man has exploited land resources to the extent that many animal species are in danger of becoming extinct. As a result of the destruction of wetlands, dumping of toxic waste in the environment, dynamiting of coral reefs and cutting and burning of tropical forests to satisfy economic needs, the survival of many living creatures is threatened.

It is estimated that the number of animal species in tropical forests may be as high as 80 million.⁽⁴⁾ In fact, between 95 and 98% of the animal species on our planet live in these forests. In some forests in the Amazon, the number of species per hectare may vary from 150 to 200. Near Iquitos, in Peru, 308 animal species per hectare were counted.

Cutting down tropical forests not only threatens the survival of certain species but, according to many people, contributes to the greenhouse effect. For instance, "in June 1990, an international research group led by the Washington-based World Resources Institute reported that Third World countries were accounting for 45 per cent of greenhouse gas emissions."⁽⁵⁾ In other words, the environmental problems of developing countries have environmental consequences that go well beyond their political borders.

It is easy for industrialized countries to blame developing countries for soil degradation, depletion and erosion, for the deforestation of tropical forests and desertification. However, according to the poorer countries, worrying about the quality of the environmental and sustainable development⁽⁶⁾ is a luxury that only industrialized countries can afford. To them, basic problems like hunger, poverty, the resulting death rate and social and political problems are far more important. To them, pollution is the price they must pay to overcome human

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- (4) Gary S. Hartshorn, "Key Environmental Issues for Developing Countries," *Journal of International Affairs*, Winter 1991, p. 395.
- (5) Richard Swift, "The Environmental Challenge: Towards a Survival Economy," *Conflicts of Interest. Canada and the Third World*, Janine Swift and Brian Tomlinson (ed.), Toronto, Between the Lines, p. 214.
- (6) The concept of sustainable development was proposed by the Brundtland Commission in its report *Our Common Future*, published in 1987. In its report the Commission maintains that if the environment and the economy are properly managed, they will reinforce each other. According to the Commission, economic growth and protecting the environment are compatible goals that are closely linked.

misery. In fact, industrializing countries see pollution of any kind as a benefit and a welcome consequence of economic progress.

The basis for this study is the following paradox. If industrialized countries continue to deny Third World countries access to northern markets because they do not respect the environment, the latter countries will be forced into non-sustainable economic development. In our opinion, by restricting international trade, the countries of the North will merely exacerbate environmental degradation and maintain developing countries in a state of poverty.

We think environmental problems and poverty in the South and the pervasive imbalance in relations between the South and the North could be reduced, if industrialized countries would let poor countries compete by investing in the kind of economy that does not unduly exploit the environment. We must, of course, make the assumption that in the future there will be major innovations in the energy sector, such as the discovery of sources of energy that are less harmful to the environment. Without this kind of technological revolution, the economic development of poor countries will merely further erode the natural resources of our planet. Nevertheless, we feel that in the long run, the environmental consequences of the status quo and the consequences of a lack of technological innovation will be equally disastrous. The countries of the North should open their borders to the products of the South. It is better to act now, even if no major technological changes come about, than do nothing at all.

INDUSTRIALIZATION OF THE SOUTH: AN ECONOMIC AND ENVIRONMENTAL DISASTER

In seeking a solution to their economic problems, Third World countries have so far been content to imitate the North. From the experience of wealthy countries, they thought that developing the primary and manufacturing sectors would be the answer to dealing with foreign debt and economic development problems. They looked at economies like ours where heavy industry, tariffs and massive industrial investment have played a major role. Once accelerated industrial development had absorbed much of the meagre capital at their disposal and private capital was no longer available, governments created State-run corporations, injecting

considerable amounts without regard for production costs, the environment, or ability to compete on international markets.

The results of industrialization were disappointing. A lack of services (management and distribution, financial services, marketing and insurance) partly explains why this was a disastrous experience in many developing countries. Other factors, including dropping prices on international markets and changes in world demand, were also a threat to the profitability of industrial investment. When copper wire was replaced by optic fibres, this had a considerable impact on the mining sector in countries like Zambia, Chile and Papua New Guinea, where copper is a major export.

The countries of the North share some of the responsibility for this fiasco. In fact, it can be claimed that traditional North-South co-operation agreements merely transfer profits from the South to the North, since capital provided by industrialized countries is used by poor countries to acquire manufacturing processes that involve the depletion of natural resources and the environment, for the sake of providing the North with cheap input. These agreements must be revised to reflect the genuine technological needs of the South.

Trade barriers between North and South are another reason why industrializing countries have trouble exporting their products. Developed countries use non-tariff barriers, which are not subject to GATT, to protect industries like textiles, steel, transportation equipment and electronics. Since the only comparative advantage of the economies of the South is based on an abundance of cheap labour with the flexibility to acquire industrial skills, in order to compete with the North these countries tend to prefer simple production processes that are often a source of pollution but also very labour intensive.

To counter so-called "unfair" competition from countries in the South, industrialized countries are raising an increasing number of trade barriers by denying these countries free access to their markets. These North-South trade barriers have major environmental consequences.

For instance, the Multi-Fibre Arrangement concluded in 1974 has considerably reduced textile exports from countries in the South. By setting export quotas, the MFA has forced many of these countries to abandon the production of manufactured goods containing fibres and turn to economic activities that make an intensive use of natural resources, including

the exploitation of tropical forests. In one of its studies, the Institute for International Economics estimated that free trade would increase exports of textiles and wearing apparel to industrialized countries by \$50 billion annually.⁽⁷⁾

When we look at exports from industrializing countries, we see that exports of manufactured goods are increasing more than primary products such as oil or food (see Table 1). The table shows that from 1980 to 1986, exports of textiles and electronic products from Asian countries increased. However, exports of primary products remain considerable. Latin American countries tend to specialize in the extraction of natural resources such as minerals, and also certain food products, while Africa tends to concentrate on tropical products. If we are concerned about protecting the environment, these specialties must be reviewed since their production is often extremely harmful to the environment.

When analyzing the link between economic development and the environment, we must also consider the fact that because of the present structure of North-South trade, we are more or less imposing our industrial structure on developing countries. We will see how this industrial structure is to a considerable extent responsible for the environmental problems in poor and industrializing countries.

Table 1
Product Composition of Merchandise Exports
from Developing Countries, 1980-86
(average)

	<u>1980</u>	<u>1986</u>
Primary products	80	59
Food	12	17
Fuel	61	34
Manufactured products	19	41
Iron and steel	1	2
Chemicals	2	3
Engineering products	7	16
Textiles and clothing	5	10
Total	100	100

Source: *Third World Economic Handbook*, London, 1989, Table 2.4, p. 32.

(7) "Something Old, Something New," *The Economist*, 22 September 1990, p. 34.

Table 2 shows the indices of manufacturing production in developing countries, by major industry, for the period from 1983 to 1986. According to the table, manufacturing production in countries in the South increased in the following sectors: paper printing and publishing, chemicals, petroleum, rubber, food and tobacco. Production of chemical products for agricultural use rose considerably in Latin American countries. The absence of strict environmental standards, reflecting a desperate attempt to attract foreign investment, partly explains why multinationals tend to concentrate production of dangerous substances in these countries and often move their biggest polluters or riskiest operations to those areas.

Table 2
Indices of Manufacturing Production in Developing Countries,
by Major Industry, 1983-86
(1980 = 100)

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Paper printing and publishing	98	105	130	148
Chemicals, petroleum, coal and rubber	102	108	115	126
Food, beverages and tobacco	105	109	114	116
Basic metals	89	99	99	105
Textiles	89	92	95	100
Wood products, furniture,	92	94	95	97
Wearing apparel, leather and footwear	88	91	93	94
Non-metallic mineral products	84	85	87	88
Metal products	71	77	82	85

Source: *Third World Handbook* (1989), Table 1.4, p. 15.

We must remember that "... Latin American countries have generally been viewed as preferring the "luxury of pollution" to the costs of managing the environment."⁽⁸⁾ Because they do not want to alienate foreign investment, these developing countries are often reluctant to adopt environmental regulations that are too stringent. Thus, "...policy makers in

(8) Stephen P. Mumme, C. Richard Bath and Valerie J. Assetto, "Political and Environmental Policy of Mexico," *Latin American Research Review*, Vol. 23, 1988, p. 7.

underdeveloped countries will be especially vulnerable to external pressure as they weigh environmental options."⁽⁹⁾ This explains why some industrializing countries like Liberia and Nigeria have few effective environmental standards.⁽¹⁰⁾

Table 3 gives the fossil fuel carbon emissions for certain countries. According to the figures, emissions per capita in industrialized countries are 20 to 30 times as high as those in developing countries, and emissions for the former Soviet Union, the United States and China alone represent 51.1 per cent of the world total.

Table 3
Country Characteristics of Fossil Fuel Carbon Emissions, 1987

	<u>Emissions per Capita in Tons/Year</u>	<u>Country Emissions as % of World Total</u>	<u>Grams of Carbon per \$ of GNP</u>
U.S.	5.03	21.9	276
Canada	4.24	1.9	247
Soviet Union	3.68	18.5	436
U.K.	2.73	2.8	224
Japan	2.12	4.5	156
Saudi Arabia	3.60	0.8	565
South Korea	1.14	0.8	347
Mexico	0.96	1.4	609
China	0.56	10.7	2,024
Egypt	0.41	0.4	801
Brazil	0.38	0.9	170
India	0.19	2.7	655
Indonesia	0.16	0.5	403
Nigeria	0.09	0.2	359
Zaire	0.03	0.01	183
Average for the World			327

Source: John Whalley, "The Interface Between Environmental and Trade Policies," *The Economic Journal*, March 1991, Table 1, p. 183.

It is a fact that emissions, measured in grams per production dollar, are much higher in the South than in the North. This is due to the industrial structure in industrializing countries and to the fact that the production processes used in these countries are not energy

(9) *Ibid.*, p. 8.

(10) James A. Tobey, "The Effects of Domestic Environmental Policies on Patterns of World Trade: An Empirical Test," *Kylos*, Vol. 43, Issue 2, Table 2, p. 197.

efficient. The table is very revealing, because it suggests it would be more worthwhile for industrialized countries to invest in developing countries and get them to reduce their polluting emissions than to try and reduce the emissions produced by industries in the North. "... Installation of more energy efficient devices in poor countries where the costs of reducing emissions are well below those at home"⁽¹¹⁾ might prove to be a more effective way to protect the environment of our planet. Since the marginal gains resulting from protecting the environment are higher in developing countries, the environmental return is higher as well and the investment more worthwhile on a global scale.

Although the manufacturing sector - which is often inefficient and uses outdated processes that cause pollution - is becoming a major exporter, many developing countries still depend on exports of raw materials or semi-finished products. Third World debt has forced these countries to deplete their natural resources in order to export them in exchange for foreign products. Poor countries often exhaust their environmental capital in order to obtain the hard currency they need to acquire imported machines and consumer goods. Unfortunately, the resources they deplete are not renewable (minerals, tropical forests, oceans) and prices are extremely vulnerable to market conditions. As poor countries start to sell their production on world markets, prices go down, which means a serious reduction in export revenue and hence in the ability to purchase imported goods and equipment. Faced with this situation, poor countries step up production and use even more fossil fuels, thus doing further damage to the environment and making prices go down even more. These countries are caught in a vicious circle, with shrinking resources and an environment constantly under attack.

This has given the North a new excuse to restrict the free circulation of products from the South. In the not so distant future, the North will probably increase its tendency to deny free access to its respective national markets, claiming that manufacturing processes used by the South pollute the environment or that exporting countries do not provide adequate protection for the planet's environmental capital (by burning tropical forests, for instance).

(11) Trygve Haavelmo and Stein Hansen, "On the Strategy of Trying to Reduce Inequality by Expanding the Scale of Human Activity," *Environmental Sustainable Economic Development: Building on Brundtland*, Robert Goodlard, Hermean Daly, Sahah El Serafy and Bern von Droste (ed.), Unesco, Paris, 1991, p. 47.

Nevertheless, as was said not long ago by Arthur Dunkel, director general of GATT, "Environmental concerns must not be kidnapped by protectionists."⁽¹²⁾

The 38 articles of the present GATT agreement make no specific reference to environmental protection, except in the case of trade in hazardous materials. Consequently, imposing environmental barriers on international trade would not be compatible with this treaty. GATT would be powerless to act if a country in the South were to question the legality of environmental barriers in an attempt to stop such action by a country in the North.

We can therefore expect the North increasingly to use international trade as a way to impose environmental objectives while protecting domestic markets. The fact that countries are so reluctant to sign environmental treaties - the failure of the Rio summit is a case in point - or to observe previously ratified agreements like the Montreal protocol on the protection of the ozone layer, means that although barriers to international trade may become so-called elements of persuasion, they will actually be an excuse for imposing trade restrictions. Brazil, the Philippines and Costa Rica may soon be open to trade sanctions if they continue to cut down their tropical forests. China may face similar sanctions if it does not reduce CO₂ emissions caused by burning coal and use cleaner and more efficient energy sources such as oil, natural gas or nuclear energy.

There is a real risk that world trade will break down as a result of trade barriers motivated by pseudo-environmental concerns. The countries of the North will probably justify many of these new barriers to international trade on environmental grounds. They will probably accuse polluting countries of not factoring in the cost of pollution and as a result keeping production costs much lower. In fact, these barriers will help northern economies protect industries that may not pollute as much but are nevertheless inefficient and not competitive. In 1991, the United States prevented imports of Mexican tuna on the grounds that dolphins were being destroyed. The Mexican government maintained that the United States simply wanted to protect U.S. fishermen.

It will be very difficult to draw the line between environmental concerns and protectionist motives. Producer associations and other pressure groups that advertise their desire

(12) Canadian Exporters' Association, *Export News*, June 1992, No. 829, p. 3.

to protect the environment may be tempted to impose their own environmental agenda. Countries in the South will not escape this trend, and if the situation we just described materializes, it will merely add to the problems of poor countries.

INTERNATIONAL TRADE AND THE ENVIRONMENT

As we have pointed out, by raising trade barriers, industrialized nations are partly responsible for the environmental damage in developing countries. Both South and North must realize that the present structure of international trade will necessarily lead to further depletion of the natural environment.

Clearly, sustainable development must be the basis for all economic development in poor countries. Since these countries depend largely on the exploitation of non-renewable natural resources, economic development must be guided by respect for the environment.

In a global context, it is imperative to find solutions to the environmental problems of the South. Besides stricter regulations, there are other options such as tax incentives or environmental levies. However, any solution based on market forces will be difficult to implement in developing countries. Since they need capital to meet their economic needs, poor countries cannot afford the luxury of protecting the environment as they should. Privatization of the environment is another solution based on market forces which is being suggested more and more in developed economies. Ownership rights would involve certain legal obligations that would force owners to respect their own natural environment and that of others or be open to prosecution. It is unlikely that this neo-classical solution would work in many countries in the South, since it would be conditional on the existence of well developed markets and an effective judiciary system.

The following innovative solution might produce results. Industrialists in the North could consider "leasing" tropical forests (instead of reducing their own polluting emissions at higher cost). The "rent" collected by poor countries would be higher than traditional leases for cutting exotic woods and raising cattle, for instance, and the environment would be protected. Nevertheless, we believe that a global solution to environmental problems in the South should be sought mainly in international trade and free trade.

Specialization is the corollary of modern international trade. This means that each region is better off producing in sectors where it has a comparative advantage, in other words, where it can produce more efficiently and at lower cost than its competitors, and trading this production for goods and services produced by other trading partners. In a free market, specialization is the key to high productivity and competing on international markets.

International trade would make it possible for developing countries to sell textiles or other goods with greater added value, instead of further eroding the environment -- by cutting and burning tropical forests, for instance -- to satisfy the imperatives of trade and ensure the survival of their people.⁽¹³⁾ Table 4 indicates the average annual tropical deforestation in a number of developing countries during the eighties. Brazil and India have cut, respectively, 9,050,000 (1.8% of the total area available) and 1,500,000 (2.3%) hectares of tropical forests, followed at a considerable distance by Indonesia with 920,000 hectares (0.8%). Relatively speaking, however, Costa Rica (6.9% of forested areas), Ivory Coast (5.2%), Nepal (4%), Sri Lanka (3.5%) and Haiti (3.8%) cut their forests more intensively. Under free trade, poor countries would be forced to change the structure of their economies.

Better specialization and more flexible trade relations would make it possible for developing countries to acquire cleaner manufacturing processes in exchange for their exports. The economic growth created by free trade would help countries in the South to increase their standard of living substantially. An increase in national income would make it possible for government authorities to invest in the construction of waste water treatment plants or electric power, for instance. Since poverty is at the root of many environmental problems, countries in the South with a rising per capita income would be able to concentrate on more productive and less polluting activities instead of trying to survive without regard for the environmental consequences. Once they became more economically secure, these countries could afford to implement stricter environmental standards.

(13) The same would also apply to Europe, because if farmers were not protected, land rents would be lower and farm land would be cultivated less intensively, which would help reduce soil degradation.

Table 4
Average Annual Deforestation During the 1980s in Certain Developing Countries

	<u>Hectares (000)</u>	<u>Percentage</u>
Ivory Coast	510	5.2
Malawi	150	3.5
Nigeria	400	2.7
India	1,500	2.3
Indonesia	920	0.8
Nepal	84	4.0
Sri Lanka	58	3.5
Costa Rica	124	6.9
Haiti	2	3.8
Jamaica	90	3.0
Brazil	9,050	1.8
Colombia	890	1.7

Source: Central Intelligence Agency, *Handbook of Economic Statistics 1991*, Washington, September 1991, Table 121, p. 175.

With the advent of new manufacturing processes, free trade between North and South would very likely improve productivity in developing countries. However, there are critics who say that increased international trade would also considerably increase environmental problems in poor countries (for instance, increased levels of water, air and soil pollution that might have long-term global consequences). The economic development of the South and free trade might, according to these critics, have a disastrous impact on the entire planet.

Granted, economic growth in the South will not occur without increased depletion of natural resources. Environmental capital should be seen as a production input, on the same basis as human capital and financial capital. As producers use more manpower and financial capital, the demand for natural resources increases.

According to the World Bank, at the present time, energy production based on fossil fuels doubles every five to ten years in developing countries.⁽¹⁴⁾ One can imagine the environmental impact of economic growth and increased energy production in poor countries. It is clear, for instance, that as economic activity intensified in Third World countries, there would be an exponential increase in CO₂ emissions. "If the development of the production of goods and services has reached a certain level at which entropy grows in spite of cleaning

(14) Andrew Steer (1992), p. 18.

efforts, the further development of the ability to produce goods and services has to increase. [...] It is a question of time for the negative effects of entropy to catch up with development."⁽¹⁵⁾ In other words, as our economies produce, it becomes more difficult to do so because of the degradation of the natural environment. According to this pessimistic scenario, the cumulative effect of our actions may restrict human industry and world economic growth.

There is, however, another, more positive perspective. The optimistic, technological view says that humankind will always find a way to process and produce inputs to satisfy its needs, without putting the natural balance of the planet at risk. According to this view, it is no use worrying about the future. With the advent of new technologies and because of constantly changing human needs, increased trade between North and South will lead to increased economic activity in poor countries and, in the long run, prove beneficial to the environment of these countries. The proponents of this view assume that new production processes will be discovered before we experience the negative environmental consequences associated with economic growth in poor countries. Our point is that if new production methods are found, the positive effects of economic development in the South and free trade will, in the long run, completely neutralize the negative environmental impact we can expect in the short and medium term.

According to critics of this hypothesis, without major technological innovations, keeping the South poor might, in the short term, be less damaging to the environment. As Trygve Haavelmo and Stein Hansen pointed out:

Rapid growth and successful development, as conventionally measured, combined with crowding and high population densities, could result in a menu of very few and very costly options for future development. In contrast, hitherto poor growth performance, low levels of infrastructure investments, slow use of the natural resources base, and a relatively sparse population ... could leave relatively more doors open for the choice between future development. Perhaps this is the flavour of optimism we could present for the peoples of Africa at this time of hardship.⁽¹⁶⁾

(15) Trygve Haavelmo and Stein Hansen (1991), p. 43.

(16) *Ibid.*, p. 47-48.

We feel industrial countries have a choice. They can introduce free trade now and make a leap of faith as to the advent of technological innovations, or wait for these innovations to come about before eliminating trade barriers and let the South continue to bear its burden of poverty and human misery.

CONCLUSION

We think free trade between North and South should be seen as a way to help preserve the planet's environmental capital. Tariff and non-tariff barriers that restrict imports, along with government subsidies, prevent a balanced distribution of resources at the global level. These barriers and distortions encourage massive clearing of tropical forests and increased use of pesticides. While pauperizing the South, such economic behaviour, which is a consequence of protectionism, leads to deterioration of the environment. Consequently, if developing countries could market their production without restrictions, they would adjust their industrial structures accordingly and thus reduce pressures on the global environment.

Free trade among rich countries would also have a beneficial impact on the environment in poor countries. Agriculture is a good example. The United States and Europe protect their agricultural sectors by means of subsidies and tariffs. The resulting artificial increase in farm income in the North encourages producers to increase production. This has created tremendous production surpluses which caused prices to go down. As a result, farmers in poor countries whose incomes were affected had to increase production by cultivating more land and increase their yield by using mechanical processes, more water, pesticides and fertilizers, thereby leading to continuing deterioration of the environment. With an entirely free market for agricultural products, countries in the South would be able to increase their farm income, which would reduce pressure on the environment.

That is why we maintain that the recently concluded North American Free Trade Agreement will protect the environment. As their national income increases, Mexicans will be able to afford the luxury of replacing polluting and inefficient manufacturing processes with new, cleaner processes that conform to stricter environmental standards.

According to certain opponents to free trade, Canada will have to lower its own environmental protection standards to meet Mexican competition. These critics feel that adopting common minimum standards up to those in effect in Canada and the United States would provide better protection for the North American environment and for jobs as well.

The question arises whether free trade would be conditional on standardizing environmental regulations. Many people would argue that it is imperative to impose international standards that would put economic partners in North and South on an equal footing, to avoid the use of national standards as thinly veiled trade barriers. In this respect, Trygve Haavelmo and Stein Hansen wrote the following: "A drive for efficient resource use in the presence of significant environmental externalities and other market imperfections requires full-cost pricing of resources in all applications. This in turn implies a need for substantial intervention at national and supra-national levels into otherwise free-market forces of domestic and international trade. Otherwise, countries that practise full-cost internalization would, in the short run, lose out to countries that did not, in a regime of free trade."⁽¹⁷⁾ According to this line of reasoning, since production costs are higher in the North than in the South -- one of the reasons being the need to meet strict environmental standards -- all countries in both North and South should be obliged to factor in the social cost of pollution as part of their production costs.

We feel this is a specious argument. It would be wrong to apply the same standards in various parts of the world, because the social costs are not the same. For instance, a chimney located in the valley of the Rhine is more harmful to the environment than the same kind of chimney in the middle of the Chad desert. The same is true in North America.

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